

# Work Order ID 92149

October-23-12 3:15:12 PM

**\*92149\***

Page 1

Item ID: D350-636-101

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Toe Step, LH/RH

Start Date: 10/23/12 Start Qty: 5.00

**\*5\***

Cust Item ID:

Required Date: 11/16/12 Req'd Qty: 5.00

**\*5\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |
|----------|--------------|
|----------|--------------|

|       |       |
|-------|-------|
| D3487 | Rev A |
|-------|-------|

|     |                  |      |  |  |  |  |  |  |  |
|-----|------------------|------|--|--|--|--|--|--|--|
| 100 | DOCUMENT CONTROL | 0.00 |  |  |  |  |  |  |  |
|-----|------------------|------|--|--|--|--|--|--|--|

**\*100\***

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPPD350-636-101 CHG001

6861.100

|     |  |      |  |  |  |  |  |  |  |
|-----|--|------|--|--|--|--|--|--|--|
| 110 |  | 0.00 |  |  |  |  |  |  |  |
|-----|--|------|--|--|--|--|--|--|--|

**\*110\***

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg \*\*\* D3487-1 \*\*\*

Dwg Rev: 1A

Prog Rev: 1A

2-Deburr if necessary

MLJ 12-11-30

~~5 0~~ Jm 12-10-29

5 0 Jm 12-10-29

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |      |      |     |   |                   |   |             |              |              |  |  |
|--|------|------|-----|---|-------------------|---|-------------|--------------|--------------|--|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |      |      |     | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> |                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |             |              |              |  |  |
| <b>Root Cause</b>  | Date | Step | Qty | Description of work order update or Non-conformance   | Initial Chief Eng | Action Description  | Sign & Date | Verification | QC Inspector |  |  |
| Doc/Data   |      |      |     |   |                   |   |             |              |              |  |  |
| Equip/Tooling  |      |      |     |   |                   |   |             |              |              |  |  |
| Operator   |      |      |     |   |                   |   |             |              |              |  |  |
| Material   |      |      |     |   |                   |   |             |              |              |  |  |
| Setup  |      |      |     |   |                   |   |             |              |              |  |  |
| Other  |      |      |     |   |                   |   |             |              |              |  |  |
| Process  |      |      |     |   |                   |   |             |              |              |  |  |
| Supplier   |      |      |     |   |                   |   |             |              |              |  |  |
| Training   |      |      |     |   |                   |   |             |              |              |  |  |
| Unapproved   |      |      |     |   |                   |   |             |              |              |  |  |

| FAULT CATEGORY  |   |   |   |  |
|---|---|---|---|--|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><br><input type="checkbox"/> Other |  |

# Work Order ID 92149

\*92149\*

Page 2

October-23-12 3:15:12 PM

Item ID: D350-636-101

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Toe Step, LH/RH

Start Date: 10/23/12 Start Qty: 5.00

\*5\*

Cust Item ID:

Required Date: 11/16/12 Req'd Qty: 5.00

\*5\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description                | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 120                            | QC2- Inspect parts off machine FAI/FAIB | 0.00                 |         |        |              |               |               |                  |                |
| *120*                          |   |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                    | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |
| 130                            | QC8- Inspect parts - second check       | 0.00                 |         |        |              |               |               |                  |                |
| *130*                          |   |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                    | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |
| 150                            | NC BRAKE                                | 0.00                 |         |        |              |               |               |                  |                |
| *150*                          |   |                      |         |        |              |               |               |                  |                |
| Brake NC                       | Memo                                    | 0.00                 |         |        |              |               |               |                  |                |
| Brake NC                       | Form as per Dwg D3487                   |                      |         |        |              |               |               |                  |                |

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|   |      |      |   |   |                   |   |             |              |  |  |   |  |
|---|------|------|---|---|-------------------|---|-------------|--------------|--|--|---|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____  |      |      |   | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> |                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |             |              |  |  |   |  |
| Root Cause  | Date | Step | Qty   | Description of work order update or Non-conformance   | Initial Chief Eng | Action Description  | Sign & Date | Verification | QC Inspector   |  |   |  |
| Doc/Data <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Equip/Tooling <input type="checkbox"/>  |      |      |   |   |                   |   |             |              |  |  |   |  |
| Operator <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Material <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Setup <input type="checkbox"/>  |      |      |   |   |                   |   |             |              |  |  |   |  |
| Other <input type="checkbox"/>  |      |      |   |   |                   |   |             |              |  |  |   |  |
| Process <input type="checkbox"/>  |      |      |   |   |                   |   |             |              |  |  |   |  |
| Supplier <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Training <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Unapproved <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| <b>FAULT CATEGORY</b>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |      |      | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |   |                   | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions   |             |              | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |  |

# Work Order ID 92149

October-23-12 3:15:12 PM

\*92149\*

Page 3

Item ID: D350-636-101

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Toe Step, LH/RH

Start Date: 10/23/12 Start Qty: 5.00

\*5\*

Cust Item ID:

Required Date: 11/16/12 Req'd Qty: 5.00

\*5\*

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start \*NR1\*

QC: Date: SPC (Y/N): Date:

Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

160

QC5- Inspect part completeness to step on W/O

0.00

\*160\*

QC

Memo

0.00

Quality Control

170

Chemical Conversion Coat per QSI005 4.1

0.00

\*170\*

HandFinish

Memo

0.00

Hand Finishing

180

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

\*180\*

Powdercoat

Memo

0.00

Powder Coating

ATTN: PAINT GLOSSY BLACK  
START TIME:

OVEN TEMPERATURE

FINISH TIME:

START TIME: 11:30

Temp: 320°F

Finish Time: 12:00

SXP

mf  
12/11/28

W123383

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |      |      |     |   |                   |   |             |              |              |  |  |
|--|------|------|-----|---|-------------------|---|-------------|--------------|--------------|--|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |      |      |     | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> |                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |             |              |              |  |  |
| Root Cause   | Date | Step | Qty | Description of work order update or Non-conformance   | Initial Chief Eng | Action Description  | Sign & Date | Verification | QC Inspector |  |  |
| Doc/Data   |      |      |     |   |                   |   |             |              |              |  |  |
| Equip/Tooling  |      |      |     |   |                   |   |             |              |              |  |  |
| Operator   |      |      |     |   |                   |   |             |              |              |  |  |
| Material   |      |      |     |   |                   |   |             |              |              |  |  |
| Setup  |      |      |     |   |                   |   |             |              |              |  |  |
| Other  |      |      |     |   |                   |   |             |              |              |  |  |
| Process  |      |      |     |   |                   |   |             |              |              |  |  |
| Supplier   |      |      |     |   |                   |   |             |              |              |  |  |
| Training   |      |      |     |   |                   |   |             |              |              |  |  |
| Unapproved   |      |      |     |   |                   |   |             |              |              |  |  |

| FAULT CATEGORY  |  |  |   |  |  |   |  |  |  |  |   |  |
|---|--|--|---|--|--|---|--|--|--|--|---|--|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |  |  | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |  |  | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |  |  | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |  |

# Work Order ID 92149

**\*92149\***

Page 4

October-23-12 3:15:12 PM

Item ID: D350-636-101

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Toe Step, LH/RH

Start Date: 10/23/12 Start Qty: 5.00

**\*5\***

Cust Item ID:

Required Date: 11/16/12 Req'd Qty: 5.00

**\*5\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                               | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 190                            | Wing Walk as per dwg QSI005 4.4 Batch                  | 0.00                 |         |        |              |               |               |                  |                |
| <b>*190*</b>                   |  |                      |         |        |              |               |               |                  |                |
| HandFinish                     | Memo   | 0.00                 |         |        |              |               |               |                  |                |
| Hand Finishing                 |  |                      |         |        |              |               |               |                  |                |
| 200                            | QC3- Inspect Part Finish                               | 0.00                 |         |        |              |               |               |                  |                |
| <b>*200*</b>                   |  |                      |         |        |              |               |               |                  |                |
| QC                             | Memo   | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |  |                      |         |        |              |               |               |                  |                |
| 210                            | Packaging  | 0.00                 |         |        |              |               |               |                  |                |
| <b>*210*</b>                   |  |                      |         |        |              |               |               |                  |                |
| Packaging                      | Memo   | 0.00                 |         |        |              |               |               |                  |                |
| Packaging                      | Identify and pack for shipping as per PPP D350-636-101 |                      |         |        |              |               |               |                  |                |
|                                | Location: <u>P6/20</u>                                 |                      |         |        |              |               |               |                  |                |
|                                | PPP Rev: _____   |                      |         |        |              |               |               |                  |                |

5 x 6 BL 12/11/29

5 x 4 BL 12/11/29

12/11/29

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|   |      |      |   |   |                   |   |             |              |  |  |   |  |
|---|------|------|---|---|-------------------|---|-------------|--------------|--|--|---|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____  |      |      |   | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> |                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |             |              |  |  |   |  |
| <b>Root Cause</b>   | Date | Step | Qty   | Description of work order update or Non-conformance   | Initial Chief Eng | Action Description  | Sign & Date | Verification | QC Inspector   |  |   |  |
| Doc/Data <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Equip/Tooling <input type="checkbox"/>  |      |      |   |   |                   |   |             |              |  |  |   |  |
| Operator <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Material <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Setup <input type="checkbox"/>  |      |      |   |   |                   |   |             |              |  |  |   |  |
| Other <input type="checkbox"/>  |      |      |   |   |                   |   |             |              |  |  |   |  |
| Process <input type="checkbox"/>  |      |      |   |   |                   |   |             |              |  |  |   |  |
| Supplier <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Training <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| Unapproved <input type="checkbox"/>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| <b>FAULT CATEGORY</b>   |      |      |   |   |                   |   |             |              |  |  |   |  |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |      |      | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |   |                   | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions   |             |              | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |  |



**Work Order ID 92149****\*92149\***

Page 5

October-23-12 3:15:12 PM

Item ID: D350-636-101

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Toe Step, LH/RH

Start Date: 10/23/12 Start Qty: 5.00

**\*5\***

Cust Item ID:

Required Date: 11/16/12 Req'd Qty: 5.00

**\*5\***

Customer:

Reference:

Run Start **\*NR1\***

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursTool ID Tool # Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

230

QC21- Final Inspection - Work Order Release

0.00

**\*230\***

QC

Memo

0.00

Quality Control

12/12/30

ME  
12-11-30

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |   |  |  |  |   |  |
|--|---|--|--|--|---|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____   | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </td> <td style="width: 33%;">           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </td> <td style="width: 33%;">           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </td> <td style="width: 33%;">           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </td> </tr> </table> | Skid-tube <input type="checkbox"/><br>Machining <input type="checkbox"/><br>Thermoforming <input type="checkbox"/><br>Large Fab <input type="checkbox"/> | Crosstube <input type="checkbox"/><br>Small Fab <input type="checkbox"/><br>Finishing <input type="checkbox"/><br>Composite <input type="checkbox"/> | Water Jet <input type="checkbox"/><br>Prod. Eng. Coord. <input type="checkbox"/><br>Rec/Store/Packaging <input type="checkbox"/><br>Supplier <input type="checkbox"/> | Engineering <input type="checkbox"/><br>Quality <input type="checkbox"/><br>Other <input type="checkbox"/> |
| Skid-tube <input type="checkbox"/><br>Machining <input type="checkbox"/><br>Thermoforming <input type="checkbox"/><br>Large Fab <input type="checkbox"/> | Crosstube <input type="checkbox"/><br>Small Fab <input type="checkbox"/><br>Finishing <input type="checkbox"/><br>Composite <input type="checkbox"/>                            | Water Jet <input type="checkbox"/><br>Prod. Eng. Coord. <input type="checkbox"/><br>Rec/Store/Packaging <input type="checkbox"/><br>Supplier <input type="checkbox"/>  | Engineering <input type="checkbox"/><br>Quality <input type="checkbox"/><br>Other <input type="checkbox"/>   |  |   |  |

| Root Cause                             | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|--|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Doc/Data <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Equip/Tooling <input type="checkbox"/> |      |      |     |   |                   |                    |             |              |              |
| Operator <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Material <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Setup <input type="checkbox"/>         |      |      |     |   |                   |                    |             |              |              |
| Other <input type="checkbox"/>         |      |      |     |   |                   |                    |             |              |              |
| Process <input type="checkbox"/>       |      |      |     |   |                   |                    |             |              |              |
| Supplier <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Training <input type="checkbox"/>      |      |      |     |   |                   |                    |             |              |              |
| Unapproved <input type="checkbox"/>    |      |      |     |   |                   |                    |             |              |              |

### FAULT CATEGORY

|   |   |   |   |
|---|---|---|---|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><br><input type="checkbox"/> Other |
|---|---|---|---|

# Picklist Print

October-23-12 3:15:12 PM

Page 1

Work Order ID: 92149

Parent Item: D350-636-101

Start Date: 10/23/12

Required Date: 11/16/12

Parent Item Name: Toe Step, LH/RH

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP Rev:A New Issue 06-03-03 JLM  
house DD verf:JLM

IPP Rev:B 11.03.15 now made in

| Component Item ID/<br>Item Name    | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty          | Qty<br>Issued | Date<br>Issued | Status      |
|------------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|-----------------------|---------------|----------------|-------------|
| M6061T6S.100<br>6061-T6 .100 Sheet |                        | Purchased     | No          |                     |                  | 110             | sf                 | 47.9000        | 0.7942      | <del>418</del><br>412 |               |                | Jm 12-10-29 |

Location

Loc Qty

Loc Code

MAT021

47.9

102201

0.5

118072

5.6

118523

41.8

118523

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

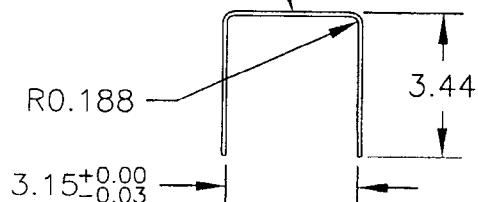
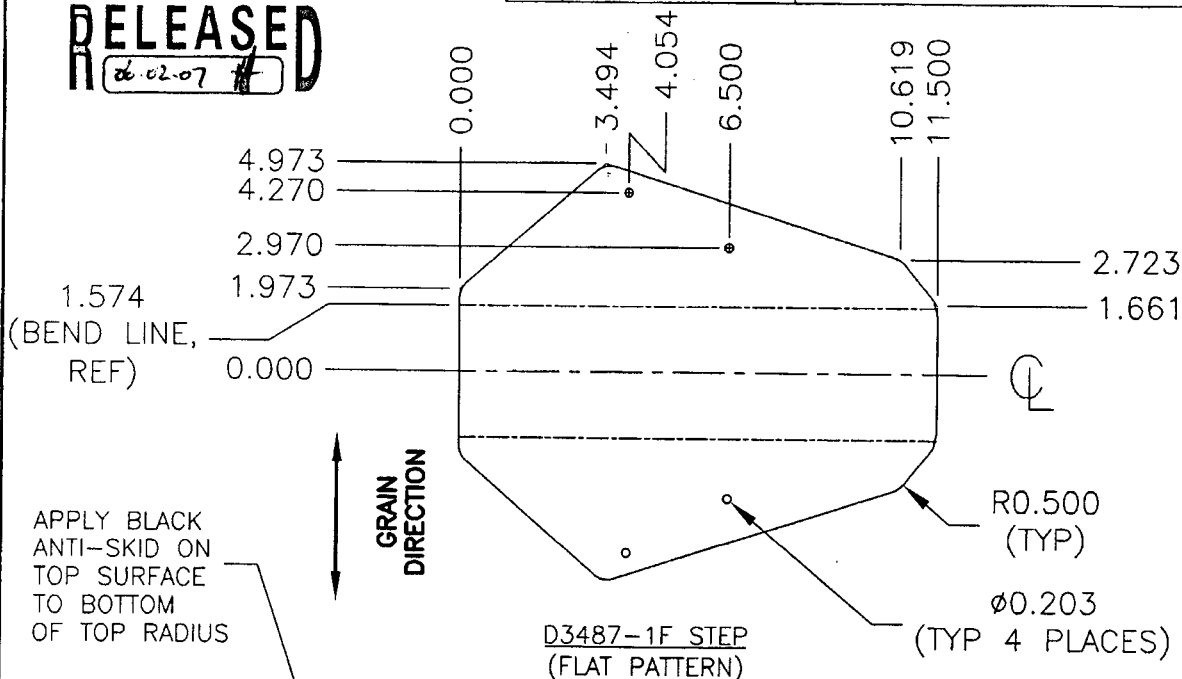
QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|   |      |      |   |   |                      |   |                |              |   |  |  |
|---|------|------|---|---|----------------------|---|----------------|--------------|---|--|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____  |      |      |   | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> |                      | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |                |              |   |  |  |
| <b>Root Cause</b>   | Date | Step | Qty   | Description of work order update<br>or Non-conformance  | Initial<br>Chief Eng | Action<br>Description   | Sign &<br>Date | Verification | QC Inspector  |  |  |
| Doc/Data <input type="checkbox"/>   |      |      |   |   |                      |   |                |              |   |  |  |
| Equip/Tooling <input type="checkbox"/>  |      |      |   |   |                      |   |                |              |   |  |  |
| Operator <input type="checkbox"/>   |      |      |   |   |                      |   |                |              |   |  |  |
| Material <input type="checkbox"/>   |      |      |   |   |                      |   |                |              |   |  |  |
| Setup <input type="checkbox"/>  |      |      |   |   |                      |   |                |              |   |  |  |
| Other <input type="checkbox"/>  |      |      |   |   |                      |   |                |              |   |  |  |
| Process <input type="checkbox"/>  |      |      |   |   |                      |   |                |              |   |  |  |
| Supplier <input type="checkbox"/>   |      |      |   |   |                      |   |                |              |   |  |  |
| Training <input type="checkbox"/>   |      |      |   |   |                      |   |                |              |   |  |  |
| Unapproved <input type="checkbox"/>   |      |      |   |   |                      |   |                |              |   |  |  |
| <b>FAULT CATEGORY</b>   |      |      |   |   |                      |   |                |              |   |  |  |
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |      |      | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |   |                      | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions   |                |              | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><br><input type="checkbox"/> Other |  |  |



**DART**

|                  |                |  |                        |
|------------------|----------------|--|------------------------|
| DESIGN<br>PH     | DRAWN BY<br>PH | DART AEROSPACE USA, INC.<br>PORT HADLOCK, WA |                        |
| CHECKED<br>H     | APPROVED<br>H  | DRAWING NO.<br>D3487                         | REV. A<br>SHEET 1 OF 1 |
| DATE<br>06.01.16 |                | TITLE<br>STEP                                | SCALE<br>1:4           |
| A                | 06.01.16       | NEW ISSUE                                    |                        |

**RELEASED**  
2-02-07**D3487-1 STEP**

- 1) MATERIAL: ALUMINUM 6061-T6/T651 ALUMINUM (QQ-A-250/11) 0.100 THICK (REF DART MATERIAL SPEC M6061T6S.100)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3  
APPLY BLACK ANTI-SKID PAINT TO TOP SURFACE PER DART QSI 005 4.4
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) ALL TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) PART IS SYMMETRICAL ABOUT CENTERLINE
- 6) BREAK UNMARKED EDGES 0.005 TO 0.010 MAX

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SUBJECT TO  
REVISION  
12-10-24  
92149 MGS